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EXAMINER
GRAHAM, ANDREW R

ART UNIT	PAPER NUMBER
2644	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/819,679	MARKS ET AL.	
	Examiner	Art Unit	
	Andrew Graham	2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

The spacing of the lines of the specification is such as to make reading difficult. New application papers with lines 1 1/2 or double spaced on good quality paper are required.

Appropriate correction is required.

Claim Objections

2. The claims are objected to because the lines are crowded too closely together, making reading difficult. Substitute claims with lines one and one-half or double spaced on good quality paper are required. See 37 CFR 1.52(b).

3. **Claims 13 and 17** are objected to because of the following informalities:

- the context or intended interpretation of the adjective "non-changing" is ambiguous; the current manner of phrasing of the claims suggest that the portions of the screen, upon operation, are "non-changing" or exhibit no visible alteration upon use of the controls. However, the context of the dials in the specification suggest that, rather, the same area of the screen is operated upon with the same, respective control. The latter interpretation has been applied in the rejection below. The applicant's assistance in correcting or

otherwise clarifying the intended interpretation of these claims is respectfully requested.

4. **Claim 17** also states "either or Claim 16" in the first line of the claim, though no option corresponding to the 'either' is further indicated in the remaining claim language. Appropriate correction or clarification is required.

Claim Rejections - 35 USC § 102

> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. **Claims 1-4, 7-9 and 25** are rejected under 35 U.S.C. 102(e) as being anticipated by Eyer et al (USPN 6588015 B1), hereafter "Eyer".

Eyer discloses a digital radio broadcast system comprising the transmission of multiple streams of content as well as manners for enable a user to alter the reproduced series of audio data.

Specifically regarding **Claim 1**, Eyer teaches:

A method for navigating the programming of an audio program provider ("service stream") (function of user end receiver, searching and selecting audio from service streams, col. 4, lines 1-10)

in which the provider (source of service stream, Figure 1, col. 5, lines 13-45) presents to listeners a standardized method for

searching, selecting and playing programming (stream format of stream from transmitter enables receiver of Figure 2 to apply common controls, col. 6, line 8 - col. 8, line 30) wherein:

the provider (transmitter) offers a top channel (received data, such as 400 or 1040) accessible simultaneously by a plurality of listeners (modulated on RF carrier, which means stream is 'accessible' simultaneously available; also, data of 400 or 1040 can be directly or be the default output to a listener, as evidenced by 450 in view of 500 and 1060 in view of 1080; col. 10, lines 43-47; col. 12, lines 17-27; col. 16, lines 4-27),

wherein each listener receives substantially a same playlist (each customer receives streams 400 or 1040, which have an associated default order of playback, as is evidenced by sequences 450 and 1060);

a listener reacts to program items that are played on the top channel (pressing skip, like/dislike buttons, or suppress advertisements buttons, based on 'not wanting' selection or 'not satisfied with selection), a cumulative history of a listener's reactions comprising a user preference (col. 8, lines 32-61; col. 12, lines 60-67; col. 16, lines 41-45);

the provider offers an ability to create a first side channel (comprising a playback stream different from the default playback stream, as shown by 450 in view of 550 or 1060 in view of 1080)

wherein an alternate personal playlist is already prepared when the listener reacts in a first manner (e.g., 'not satisfied', col. 12, lines 60-63 or), to a program item of the top channel (the

information for 550 is known ahead of time, as data ahead of playback time are transmitted at a rate greater than playback, col. 10, lines 65-66 and col. 12, lines 17-28; and 1080 is based on known access points in a control stream, col. 15, line 58-col. 16, line 59);

the first side channel including programming that reflects a combination of a style of the provider of the selected top channel and the user preference (streams may be of type, thus audio segments are of that type, col. 7, lines 12-14; as such, the programming in a alternate channel or playback stream represents the style of the stream sequence provider by virtue of the playing of the same type, eg. jazz or classical, of audio segments, while also representing the user's preferences by virtue of the skipped, suppressed, or otherwise altered order of segments that are played back),

wherein the listener creates a personal playlist of programming in near real time during the course of listening and reacting to a channel (service stream) of the program provider (skipping, suppressing, or indicating of like/dislike influence immediate playback stream or are immediately stored for future playback alteration, col. 8, lines 45-61; col. 12, lines 24-27; col. 16, lines 42-44).

Regarding **Claim 2**, Eyer teaches:

the listener may immediately select either one of the top channel and the first side channel (buttons have immediate result, affecting future playback stream, col. 8, lines 45-61; col. 12, lines 24-27; col. 16, lines 42-44).

Regarding **Claim 3**, Eyer teaches:

wherein the listener's reaction includes a negative response to a program item of the top channel ("dislike" or "not satisfied" or "unwanted" are noted reactions for a user in the operation of the system, col. 8, lines 34-39; col. 12, lines 60-63; col. 16, lines 25-27).

Regarding **Claim 4**, Eyer teaches:

wherein a style (manner in which the default programs are played for a user) of the first side channel (alternate playback stream, e.g., 550 or 1080) reflects a listener's dislike of a program item of the top channel (style or manner of playback that checks user's disliked songs and automatically skips disliked song "reflects a listener's dislike", col. 8, lines 45-48; alternatively, the "commercial-free" style at least reflects a user's relative dislike of advertisements in a default or otherwise free channel, as compared to the otherwise available audio content, col. 19, lines 11-22).

Regarding **Claim 7**, Eyer teaches:

the first side channel includes a playlist that comprises in majority the program items of the top channel (for the example of suppressed commercials or 'disliked' songs, only the disliked songs or the commercials are removed from the resulting, modified playback streams, col. 8, lines 45-48; col. 16, lines 18-21)

Regarding **Claim 8**, Eyer teaches:

wherein the listener reacts in the first manner to program items of the personal playlist of the first side channel, (for example, user

presses 'skip' indicating 'not satisfied' with current song (track E) after already pressing skip while on track D, Figure 6, col. 12, lines 37-67) and

a further personalized playlist is already prepared when the listener so reacts, thereby further refining the first side channel (playlist comprises tracks F-J after second skip, eliminating the remaining part of track E, Figure 6; such an order is 'already' prepared by virtue of its pre-buffering, col. 13, lines 1-8).

Regarding **Claim 9**, Eyer teaches:

wherein a second side channel is already prepared (partially stored or buffered) when the listener reacts in a second manner to a program item of either the top channel or the first side channel (tracks E and F are at least partially stored before pressing of skip button, col. 13, lines 1-8).

Regarding **Claim 25**, Eyer teaches:

A method of payment for audio programming (function of Eyer establishes "paying subscribers, col. 16, lines 28-34)

wherein a listener receives a default channel (information in free service bandwidth, 1134) of programming from a station (such as 'CBS', col. 7, lines 9-12;) affiliated with a network of further stations (such as the stations providing classical or jazz music, col. 7, lines 12-14; affiliation with a 'network' by virtue of multiple service streams may be on the same physical transmission channel, col. 7, lines 14-15), wherein:

a managing organization operates a benefit program whereby a listener receives credits (represented in Eyer by access to difference levels of service)for engaging in certain activities while listening to affiliated program sites (implicit that some overarching organization collects the fee from the paying subscribers, by virtue of said subscribers being 'paying'; transmitter controls buffering, thus transmitter is implicitly at least a part of such an overarching organization, col. 19, lines 52-54);

the certain activities including at least one of: responding to surveys, responding to advertising, and paying a subscription fee (listening to commercials reduces comparative charge for not listening to commercials, col. 17, lines 47-49; also, subscription based, col. 16, lines 28-34)

the programming is from a top channel comprising a playlist that includes commercial advertising (stream 1040, col. 16, lines 4-10; default playlist shown in 1060, col. 16, lines 14-18);

a personalized playlist is provided to the listener when the listener performs the certain activities (1080 playlist is for paying subscribers, or subscribers who have paid, col. 19-22),

the personalized playlist having a reduction in commercials in relation to the top channel playlist (Figure 10, 1060 has both commercials while 1080 has no commercials; see also modes of service of col. 18, line 49 - col. 19, line 62; see also metered mode, col. 17, lines 46-49),

the reduction in commercials being proportionate to a quantity of credits the listener receives (in the basic operation of Figure 10, the status of "paying", considered herein an equivalent of one 'credit' in the language of the claim, receives an entire reduction of commercials, col. 16, lines 18-21; not paying, or no 'credit' results in a commercial filled playlist, 1060, col. 16, lines 14-18; thus, commercial vs. commercial-free is proportionate to paying or not playing, again, considered 'credit/no credit' in the language of the present claim; see also metered viewing of Eyer, comprising paying for skipping commercials; thus, the number of payments, or 'credits' in the language of the present claim, are proportionate to the skipped commercial content);

the listener may immediately select either one of the top channel's playlist and the personalized playlist (listener may manually change from commercial/no-commercial mode, col. 16, lines 41-45)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. **Claims 5-6 and 10-11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Eyer as applied above and in further view of Herz et al (USPN 6088722 A), hereafter "Herz".

As detailed above, Eyer discloses a system for transmitting a digital audio stream and enabling and end receiving unit to modify the playback of the received content.

Regarding **Claim 5**, Eyer teaches:

the program provider (source of a service stream) is an affiliate of a network of program providers (multiple sources, thus providers, may be received, col. 7, lines 9-15 and col. 14, lines 63-64)

a listener has access to distinct personal playlists on sidechannels of respective distinct program providers (channels can provide different types of music, such as jazz and classical; as such, skipping, suppressing, or indicating a song as disliked, would at least result in a different playback stream for each of the provided service streams, as the involved audio content would be of a different genre; col. 7, lines 12-14).

While the system of Eyer discloses the inclusion of other audio content in the service streams from each of the digital audio broadcast locations, Eyer does not clearly teach or suggest:

- a network operator provides guidance in methods for the program providers to assemble personal playlists

Herz discloses a system for passively constructing content channels for output to a user.

Regarding **Claim 5**, Herz, in view of the teachings other applied reference(s), at least suggests:

- a network operator (headend 502 in view of gateway network 30 of Clayton) provides guidance (by use of assembly matrices) in methods for the program providers (transmitters of Figure 1 of Eyer in view of program sources 402 in Figure 5 of Herz) to enable listeners to assemble personal playlists (headend 502 utilizes an assembly matrix for constructing virtual channels from available content, col. 9, lines 42-63 and col. 43, lines 31-65; such an agreement matrix produces alternate content that customers might most likely prefer to watch, wherein said alternate content is offered on a separate channel distinct from the standard network broadcast, col. 26, lines 3-67, col. 27, lines 1-10, col. 28, lines 3-18; use of such assembly matrices to suggest alternate content is taken at least in view of alternate content E provided for a user in Eyer from a service stream, col. 17, lines 22-29; Herz notes that virtual radio channels may be created with the disclosed system, col. 52, lines 30-39 and that likes/dislikes may be incorporated in establishing the system, col. 34, lines 54-57).

To one of ordinary skill in the art at the time the invention was made, it would have been obvious to modify the service program sources in the system of Eyer to incorporate or be associated with a headend or feedback system comprising the assembly matrix circuitry of the system of Herz. The motivation behind such a modification would have been that such a system would have at least enabled the content most

likely to be preferred by a user to be selected as alternate content in the system of Eyer. Providing alternate, desirable content would have enabled a service stream provider to minimize the chances of an end user changing stations, as is generally known in the art, and further evidenced by the teachings of Chan (col. 3, lines 42-45).

Regarding **Claim 6**, Herz, in view of the teachings other applied reference(s), at least suggests:

the personal playlists substantially comprise program items from a respective provider's in-house program material (Herz discloses use of content profiles of radio stations in creating virtual channels, col. 52, lines 30-34; it is further noted that sources of audio for a service provider in Eyer, Figure 1, comprise music programming, news, and other programming currently available with conventional analog radio systems, col. 5, lines 13-21; as such conventional systems are well-known in the art to utilize in-house materials, the modified playback streams of Eyer are also hereby understood to comprise music substantially from a service stream provider's in house material).

Regarding **Claim 10**, Eyer in view of Herz teaches or at least suggests:

the control device (receiving unit, Figure 2 of Eyer) incorporates a means of input for voice commands (inherent, voice control interface, col. 7, lines 20-21 of Eyer) and a means of output for listening to programming (inherent, in context of system, a user listens to audio signals, thus the outputs of 255 and 260 are

connected to some form of speaker means, col. 6, lines 44-6 and 62-67 of Eyer);

the audio program provider incorporates a means (such as selection ID data in 245 of Eyer) for interpreting and responding to a voice command (voice interface may be used, col. 7, lines 20-21; the data stored in 245 from the service stream defines or provides an interpretation to the voice control signal corresponding to the 'song id' button in terms of what information is or will be output; col. 6, lines 40-49; col. 7, lines 22-28; said data is thus used to provide a response to the user, col. 7, 22-28 of Eyer)

a provider offer comprises a voice reply (data from provider may be a spoken or description, col. 7, lines 25-28 of Eyer);

the programming is accessed and retrieved by means of a wireless network (from antenna, col. 5, lines 38-50 of Eyer) connected to the Internet (sources of audio in Eyer for stations in Eyer, col. 5, lines 15-21, in view of reception of multimedia information from internet as source for broadcast for Herz, col. 52, lines 45-49). To one of ordinary skill in the art at the time the invention was made, it would have been obvious to utilize the internet as a source of information because the internet is a diverse source of said information by virtue of its easier access for publishers than, for example, commercial radio or television broadcasts.

Regarding **Claim 11**, please refer above to the grounds of rejection applied to the similar limitations of Claim 5.

7. **Claims 12-14 and 18-19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Clayton et al (USPN 6725022 B1) in view of Chan (USPN 6600908 B1).

Clayton discloses an multi-format radio device and corresponding network.

Specifically regarding **Claim 12**, Clayton teaches:

A method of navigation (operation of device 20) the programming of an audio program provider (selected station) affiliated with a network (defined by sources commonly received by 20) of other providers (all sources/stations received by 20)(col. 5, line 65-col. 6, line 11; col. 9, line 1 - col. 10, line 45) wherein:

a standardized control device (20, comprising display 160 and buttons 166,164,172,174) is used to search, select and play programming of the providers (see for example, col. 9, lines 20-51),

the providers being the operators of stations (channel corresponds to station, col. 9, lines 49-51);

the control device includes a display screen (160) to assist a listener in navigating programming (shows hierarchical tree for browsing and selecting stations, col. 9, lines 13-21);

the display screen includes distinct portions dedicated for displays of specific types of information about the programming (hierarchical tree portion discloses category, col. 9, lines 40-51; other portion shows information about selected channel, including station call letters, Figure 2),

the respective portions of the display (tree and selected portions, Figure 2)screen being used in a common manner among a majority of affiliated providers of the network (right side shows selected channel info, channels may be from AM,FM, internet, etc., organized by format, col. 6, lines 1-11 and 45-54; col. 9, lines 21-29);

a network operator (30) guides the affiliated providers (42 and other sources) with respect to the type of information that is to be displayed in respective portions of the display screen (160)(implicit, if not inherent, that 30 'guides' stations or broadcasters with respect to the type of information displayed in respective portions by virtue of conversion of content (192) to format appropriate display on the devices (20), col. 10, line 66 - col. 11, line 3; Clayton also 'guides' sources with respect to the information displayed in respective areas of the display screen in the sense that channel/station information with respect to a certain geographical location is shown in a first portion of a display (hierarchical, col. 9, lines 14-51), while another portion of the display (selected channel, Figure 2) displays other programming information including logos, for the selected channel; it is further noted that gateway network 30 may also be considered to 'guide' providers with respect to the type of information shown in the respective portions of the display by virtue of the gateway network 30 will enable or prevent certain stations or formats, as well as personal information channels,

from appearing as selections on the personal device 20, col. 14, lines 19-39);

a portion of the display screen describes a station identity of the program provider (selection channel portion shows station call letters, Figure 2), and

a further portion of the display (hierarchical) screen describes a channel of programming offered by the station (hierarchical at least describes category of channel of station, col. 9, lines 40-51);

While the system of Clayton discloses the reception of a channel from a station, col. 9, lines 49-51, Clayton does not clearly teach or suggest:

- the control device includes a first input device whereby the listener can select between at least two channels of the station, including a top channel, and a side channel,
- the top channel being accessible simultaneously by a plurality of listeners, wherein each listener receives substantially a same playlist, and
- the side channel comprising an alternate playlist distinct from that of the top channel;
- the listener being able to immediately select either one of the top channel and the side channel.

Chan discloses a system for enabling a single broadcast location to emit multiple streams of audio information.

Specifically regarding **Claim 12**, Chan, in view of the teachings of Clayton applied above, teaches or at least suggests:

- the control device (102 in view of 20 of Clayton) includes a first input device (110) whereby the listener can select between at least two channels of the station, including a top channel, and a side channel (by index button, 110, user can switch between main and a designated on demand program, col. 3, lines 3-26),

the top channel (main channel) being accessible simultaneously by a plurality of listeners , wherein each listener receives substantially a same playlist (music, commercials) (col. 2, lines 44-58), and

the side channel comprising an alternate playlist (sports, traffic) distinct from that of the top channel (on-demand comprises information of interest to users only some of time, col. 2, lines 58-65; col. 3, lines 27-41);

the listener being able to immediately select either one of the top channel and the side channel (can switch to on-demand 'anytime' user wishes, col. 3, lines 33-39).

To one of ordinary skill in the art at the time the invention was made, it would have been obvious to utilize the on-demand style of transmission and associated controls as part of the channel transmission and reception in the system of Clayton, as is taught for the transmission and reception in the system of Chan. The motivation behind such a modification would have been that providing such alternate programming and corresponding access to said programming would have enabled a broadcast station to eliminate the need for a user to switch to a competing broadcast station to receive

occasionally desired information. For a user, such a system would have enabled the reception of programming at anytime, including particular times of interest for said programming or information.

Regarding **Claim 13**, Chan, in view of the teachings other applied reference(s), at least suggests:

the first input device (110) operates upon a non-changing portion of the display screen (index button 110, by virtue of associated function, operates on the 'name of selected on demand program material' portion of screen, col. 3, lines 12-19; the buttons, such as 162, of Clayton also suggest a constant or 'non-changing' function between buttons and a portion of screen, col. 9, lines 30-51).

Regarding **Claim 14**, Chan, in view of the teachings other applied reference(s), at least suggests:

the control device includes two input devices (104,110),

the first input device (110) which operates to select a channel of the station (110 selects among on-demand channels of programming, col. 3, lines 12-19), and

a second input device (104) which operates to select the station operated by the provider (col. 3, lines 7-8) .

Regarding **Claim 18**, Chan, in view of the teachings other applied reference(s), at least suggests:

the side channel is accessible simultaneously by a plurality of listeners (common alternate content for plurality of listeners, col. 57-65, which in further view of the manner of transmission (RF), further suggests the 'simultaneous' nature of said materials)

wherein each listener receives substantially a same playlist on the alternate channel (same received signal comprising the on-demand content; thus, same playlist of on-demand content, col. 2, lines 41-43)

Regarding **Claim 19**, Clayton, in view of the teachings other applied reference(s), at least suggests:

the side channel (on demand material of Chan) includes a personalized playlist that is unique to the user (on-demand material of Chan, such as traffic, in view of ability to transmit personalized event information, such as traffic information based on user location, in Clayton, col. 12, lines 8-14; stock information may also be personalized in system of Clayton, taken in view of desirability of stock reports in system of Chan, col. 1, lines 33-42).

8. **Claim 15** is rejected under 35 U.S.C. 103(a) as being unpatentable over Clayton in view of Chan as applied above, and in further view of Lehr (USPN 6741869 B1).

As detailed above, Clayton discloses a system for receiving and navigating a plurality of channels of information, which Chan discloses a system for transmitting multiple sets of information from one broadcast location.

While both Clayton and Chan disclose tuner controls, Clayton in view of Chan do not clearly teach or suggest:

wherein at least one of the first input device and the second input device is a rotatable dial

However, rotatable dials, particularly for tuning purposes were well-known in the art at the time of invention, as is at least evidenced by the teachings of Lehr.

Specifically regarding **Claim 15**, Lehr teaches:

wherein at least one of the first input device and the second input device (104 of Chan in view of 108 dial of Lehr) is a rotatable dial (col. 3, lines 54-56)

To one of ordinary skill in the art at the time the invention was made, it would have been obvious to at least use a dial for the tuner control input component in the system of Clayton in view of Chan, as is taught by Lehr. The motivation behind such a modification would have been that such a rotatable dial enables selection from a plurality of selections to be made based on a single manipulation, rather than a number of repeated manipulations, as is generally taught by Lehr. It is further noted that buttons and dials are art recognized equivalents of physical controls used for the manipulation of radio controls by human digits, as is noted by Lehr, col. 3, lines 45-48.

9. **Claims 16-17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Clayton in view of Chan as applied above, and in further view of Lehr and Easty et al (USPN 6448987), hereafter "Easty".

As detailed above, Clayton discloses a system for receiving and navigating a plurality of channels of information, which Chan

discloses a system for transmitting multiple sets of information from one broadcast location.

While both Clayton discloses category controls (162), Clayton in view of Chan do not clearly teach or suggest:

- a third input device comprises a rotatable dial and
- the third input device operates to select a category of programming.

However, rotatable dials, particularly for tuning purposes were well-known in the art at the time of invention, as is at least evidenced by the teachings of Lehr.

Specifically regarding **Claim 16**, Lehr teaches:

- a third input device (104) comprises a rotatable dial (col. 3, lines 53-54) and
- the third input device (104 in view of 162 of Clayton) operates to select a category of programming (col. 3, lines 53-54).

To one of ordinary skill in the art at the time the invention was made, it would have been obvious to at least use a dial for the category control input component in the system of Clayton in view of Chan, as is taught by Lehr. The motivation behind such a modification would have been that such a rotatable dial enables selection from a plurality of selections to be made based on a single manipulation, rather than a number of repeated manipulations, as is generally taught by Lehr. It is further noted that buttons and dials are art recognized equivalents of physical controls used for the manipulation

of radio controls by human digits, as is noted by Lehr, col. 3, lines 45-48.

Clayton in view of Chan and Lehr are not further considered to teach or suggest:

- the third input device comprises a rotatable dial positioned coaxially around the second input device

However, the concept of coaxial dials was known in the art, as is represented by the teachings of Easty.

Specifically regarding Claim 16, Easty, in view of the teachings of the other applied references, teaches or at least suggests:

the third input device (category control 104 of Lehr in view of 162 of Clayton) comprises a rotatable dial positioned coaxially around the second input device (108 site control of Lehr in view of channel control 162 of Clayton)(Easty suggests the concept of concentric rings, wherein the items associated with the outer rings, considered equivalent herein to the category dials of Lehr, may be subcategorized by an inner dial or control structure, considered herein analogous to the channels within the menu structures of Lehr or Clayton; see col. 3, line 62-col. 4, line 17 of Easty).

To one of ordinary skill in the art at the time the invention was made, it would have been obvious to make the category control of Clayton in view of Chan and Lehr to be coaxially aligned with the channel/site controls of Clayton in view of Chan and Lehr, in view of the concentric rings of Easty. Both Clayton and Lehr teach channels

being subcategories of station genres (col. 9, lines 40-51 of Clayton and col. 3, lines 56-58 of Lehr). The motivation behind such a modification would have been that such a concentric relationship would have provided a visual representation of the respective menu levels of the category and channel controls for the system of Clayton in view of Chan and Lehr, as is conceptually suggested by the teachings of Easty (col. 2, line 62-col. 3, line 5). The reference of Sakamoto et al (USPN 5950035) has been cited herein to evidence the notion that physical, concentric dials were known in the art at the time of the invention for use with radio transceivers.

Regarding **Claim 17**, Lehr in view of the other applied references at least teach or suggest:

wherein at least one of the second input device and the third input device operates upon a respective non-changing portions of the display screen (such an association is at least suggested by the teachings of Lehr, which comprise dedicated, distinct screens, col. 3, lines 50-61)

10. **Claims 20-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Clayton in view of Eyer.

Clayton discloses an multi-format radio device and corresponding network.

Specifically regarding **Claim 20**, Clayton discloses:

A method of navigation (operation of device 20) the programming of a distinct station an audio program provider (selected station)

affiliated with a network (defined by sources commonly received by 20) of other providers (all sources/stations received by 20)(col. 5, line 65-col. 6, line 11; col. 9, line 1 - col. 10, line 45) wherein:

the audio program providers offer information that is of interest to users (such as blues or country music, col. 9, lines 37-40),

including a top channel of each provider (station) comprising a default playlist of information comprising distinct playlist items that are played sequentially on an audio device (inherent, as system of Clayton comprises one channel per station, as is suggested by col. 9, lines 40-51);

a standardized control device (20, comprising display 160 and buttons 166,164,172,174) is used to search, select and play programming of the providers (see for example, col. 9, lines 20-51),

the control device including a display screen (160) to assist a listener in navigating programming (shows hierarchical tree for browsing and selecting stations, col. 9, lines 13-21);

the control device operates in a substantially common manner when used to play programming of stations affiliated with the network (plurality of sources may be from AM,FM, internet, etc., all are organized by format, col. 6, lines 1-11 and 45-54; col. 9, lines 21-29);

at least one search control selector (162) of the control device is used to control multiple levels of information (such as 'major category' and 'radio industry formats' (col. 9, lines 20-51),

higher levels (major categories) being of a relatively broad descriptive nature (such as 'talk' or 'music' or 'tv audio', col. 9, lines 20-26), and

lower levels defining a style of a particular playlist of information (such as blues or jazz, under music category, col. 9, lines 37-49);

However, beyond the personalization of information services, Clayton does not teach or clearly suggest the modification of received information, including:

- the user operates a modification feature of the control device to modify the default playlist of information, thereby creating a personalized playlist of information from the default playlist of information
- the at least one search control selector and the modification feature being distinct elements of the control device;
- the personalized playlist of information reflecting a user's history of modifying the default playlist;
- a search control selector enabling the user to immediately select either the default playlist of the top channel or the personalized playlist of information.

However, Eyer discloses a system for modifying the playback of a received service stream.

Regarding **Claim 20**, Eyer, in view of the teachings other applied reference(s), at least suggests:

- the user operates a modification feature (pressing of like/dislike, skip, or commercial suppression buttons, col. 8, lines 32-48; col. 12, lines 60-67; col. 16, lines 44-45) of the control device to modify the default playlist of information, thereby creating a personalized playlist of information from the default playlist of information (future dislikes are skipped, remaining content of unsatisfactory song is skipped, or commercials are suppressed - all based on a default, currently received service stream, col. 8, lines 45-48; col. 12, lines 63-65; col. 16, lines 18-21)
- the at least one search control selector and the modification feature being distinct elements of the control device (tuning 238 and skip/dislike/commercial buttons are separate in system, col. 7, lines 1 - col. 8, line 44, taken in view of controller 162 of Clayton);
- the personalized playlist of information reflecting a user's history of modifying the default playlist (a playlist without commercials or the remainder of a song reflects the immediate history of pressing 'skip' or suppress commercial buttons, col. 12, lines 60-67; col. 16, lines 41-45; alternatively, resulting playlist from 'dislikes' represents all previous indications of disliked programs, col. 8, lines 42-48);
- a search control selector (such as skip button or suppress commercial button)enabling the user to immediately select either the default playlist of the top channel or the

personalized playlist of information (immediately skips songs or commercials or initiates subsequent suppression of commercials, col. 12, lines 24-27; col. 16, lines 41-42).

To one of ordinary skill in the art at the time the invention was made, it would have been obvious to include the modification controls and capabilities of the system of Eyer as part of the channel processing in the reception portion (20) of Clayton. The motivation behind such a modification would have been that such features would have provided a user an interactive control of a broadcast system, while also established a source of payment or subscription fee for a service provider.

Regarding **Claim 21**, Eyer, in view of the teachings other applied reference(s), at least suggests:

a station selector (238) comprises a search control selector (238 in view of controller 162 of Clayton)(col. 9, lines 14-51 - though it is noted that the elements in this limitation appear as if they should be reversed), and

the station selector (238) is used to search and select the stations of affiliated providers of information (stations commonly available to receiver of Figure 2; col. 7, lines 1-7).

Regarding **Claim 22**, Eyer, in view of the teachings other applied reference(s), at least suggests:

a further search selector comprises a channel selector (skip or channel suppression buttons, col. 12, lines 17-27; col. 16, lines 41-42) which operates at a level below the station selector to search and

select playlists of information within a selected station (skip and channel suppress operate on same selected channel, see Figures 5 or 10).

Regarding **Claim 23**, Clayton, in view of the teachings other applied reference(s), at least suggests:

wherein a portion of the display screen is dedicated (designated by circuitry operating display 160) to display an (identity Call letters) of the station (selected channel)(selected channel portion that actually or specifically shows the call letters in Figure 2 of Clayton), and

a further portion of the display screen is dedicated (designated by circuitry operating display 160) to identify a type of information that is being audibly played (categories in hierarchical tree portion of Clayton, col. 9, lines 30-51).

Regarding **Claim 24**, Clayton, in view of the teachings other applied reference(s), at least suggests:

an additional further portion of the display screen is dedicated (designated by circuitry operating display 160) to specifically identify the information that is being audibly played (explicit portion of 'selected channel display of Figure 2 of Clayton that shows 'programming information', wherein such information is noted by Clayton to include a program listing, col. 11, lines 9-14; Eyer also discloses the use of a display 262 to show song identifications, col. 7, lines 22-25; 'dedicated', as applied in the present claim language, does not obviate the application of the references of Clayton and

Eyer, as the broadest reasonable interpretation of said term does not establish limitations on the nature (such as duration, timing) of such dedication; it is also further noted that Lehr suggests dedicated portions for display of such information, by virtue of distinct screens, though said reference is not explicitly relied upon herein)

11. **Claim 26** is rejected under 35 U.S.C. 103(a) as being unpatentable over Eyer in further view of Clayton and Herz.

Eyer discloses a digital radio broadcast system comprising the transmission of multiple streams of content as well as manners for enable a user to alter the reproduced series of audio data.

Specifically regarding **Claim 26**, Eyer teaches:

A method for navigating the programming of a distinct station (default, or commercial free) of an audio program provider (transmitter of 12 of "service stream") affiliated with a network of other stations (function of user end receiver, searching and selecting audio from service streams, col. 4, lines 1-10; multiple streams may be received and thus are 'affiliated' by virtue of their common reception, col. 14, lines 63-64)

the station (transmitter) offers a top channel (received data, such as 400 or 1040) accessible simultaneously by a plurality of listeners (modulated on RF carrier, which means stream is 'accessible' simultaneously available; also, data of 400 or 1040 can be directly or be the default output to a listener, as evidenced by 450 in view of

500 and 1060 in view of 1080; col. 10, lines 43-47; col. 12, lines 17-27; col. 16, lines 4-27),

wherein each listener receives substantially a same playlist (each customer receives streams 400 or 1040, which have an associated default order of playback, as is evidenced by sequences 450 and 1060);

a listener reacts to program items that are played on the top channel (pressing skip, like/dislike buttons, or suppress advertisements buttons, based on 'not wanting' selection or 'not satisfied with selection), a cumulative history of a listener's reactions comprising a user preference (col. 8, lines 32-61; col. 12, lines 60-67; col. 16, lines 41-45);

the station offers an ability to create a first side channel (comprising a playback stream different from the default playback stream, as shown by 450 in view of 550 or 1060 in view of 1080)

wherein an alternate personal playlist is already prepared when the listener reacts (e.g., 'not satisfied', col. 12, lines 60-63 or), to a program item of the top channel (the information for 550 is known ahead of time, as data ahead of playback time are transmitted at a rate greater than playback, col. 10, lines 65-66 and col. 12, lines 17-28; and 1080 is based on known access points in a control stream, col. 15, line 58-col. 16, line 59);

the listener is automatically switched from a top channel to the side channel when the listener reacts to the program item of the first channel (for 'dislike' indication, future occurrences of program item are automatically skipped, col. 8, lines 42-48; for skip, remaining

part of program item is passed, col. 12, lines 24-27; for suppressing of commercials, the playback of a commercial may also automatically occur when a user has indicated a preference for audio programs by the associated button, col. 16, lines 41-45)

both the top channel and the side channel being immediately accessible to a listener after the side channel is created (data is received at a rate greater than playback, and thus may be accessed immediately upon reception by skipping, as is indicated by Eyer, col. 10, lines 65-678; col. 13, lines 1-8; col. 19, lines 11-31)

the first side channel including programming that reflects a combination of a style of the station (stream) that offers the selected top channel and the user preference (streams may be of type, thus audio segments are of that type, col. 7, lines 12-14; as such, the programming in a alternate channel or playback stream represents the style of the stream sequence provider by virtue of the playing of the same type, eg. jazz or classical, of audio segments, while also representing the user's preferences by virtue of the skipped, suppressed, or otherwise altered order of segments that are played back),

wherein the listener creates a personal playlist of programming in near real time during the course of listening and reacting to a channel (service stream) of the station (each of skipping, suppressing, or indicating of like/dislike serve to influence immediate playback stream or are immediately stored for future

playback alteration, col. 8, lines 45-61; col. 12, lines 24-27; col. 16, lines 42-44).

a listener has access to distinct personal playlists on sidechannels of respective distinct program providers (channels can provide different types of music, such as jazz and classical; as such, skipping, suppressing, or indicating a song as disliked, would at least result in a different playback stream for each of the provided service streams, as the involved audio content would be of a different genre; col. 7, lines 12-14).

While Eyer discloses that a plurality of streams (and thus implicitly, channels from stations) may be received, Eyer does not clearly teach or suggest:

at least some of the stations are owned and operated independently from each other

Clayton discloses a system for receiving and listening to a plurality of input streams.

Specifically regarding **Claim 26**, Clayton discloses:

at least some of the stations are owned and operated independently from each other (for example, FOX and CNN are independently owned, Figure 5, col. 14, lines 15-19 in Clayton);

To one of ordinary skill in the art at the time the invention was made, it would have been obvious to modify Eyer to receive streams from a plurality of commercially broadcast streams or stations, as occurs in the system of Clayton. The motivation behind such a

modification would have been that such reception would have increased the number and diversity of sources of content for the receiving system of Eyer.

While Clayton discloses a central gateway network (30) involved with such a system, Eyer in view of Clayton does not teach or suggest:

- a network operator provides guidance in methods for the station to enable listeners to assemble personal playlists

Herz discloses a system for passively constructing content channels for output to a user.

Regarding **Claim 26**, Herz, in view of the teachings other applied reference(s), at least suggests:

- a network operator (headend 502 in view of gateway network 30 of Clayton) provides guidance (by use of assembly matrices) in methods for the station to enable listeners to assemble personal playlists (headend utilizes an assembly matrix for constructing virtual channels from available content, col. 9, lines 42-63 and col. 43, lines 31-65; such an agreement matrix produces alternate content that customers might most likely prefer to watch, wherein said alternate content is offered on a separate channel distinct from the standard network broadcast, col. 26, lines 3-67, col. 27, lines 1-10, col. 28, lines 3-18; use of such assembly matrices to suggest alternate content is taken at least in view of alternate content E provided for a user in Eyer, col. 17, lines 22-29; Herz notes that virtual radio channels may be created with the disclosed system, col. 52, lines 30-39 and that

likes/dislikes may be incorporated in establishing the system, col. 34, lines 54-57).

To one of ordinary skill in the art at the time the invention was made, it would have been obvious to modify the service program sources in the system of Eyer in view of Clayton to incorporate or be associated with a headend or feedback system comprising the assembly matrix circuitry of the system of Herz. The motivation behind such a modification would have been that such a system would have at least enabled the content most likely to be preferred by a user to be selected as alternate content in the system of Eyer in view of Clayton. Providing alternate, desirable content would have enabled a service stream provider to minimize the chances of an end user changing stations, as is generally known in the art, and further evidenced by the teachings of Chan (col. 3, lines 42-45).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Pezzillo et al (USPN 6434621 B1) discloses a system for creating and managing a plurality of broadcast stations.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Graham whose telephone number is 571-272-7517. The examiner can normally be reached on Monday-Friday, 8:30 AM to 5:00 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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PRIMARY EXAMINER